AMENDMENTS TO THE CLAIMS

1. (Currently amended) A substrate processing apparatus, ~~characterized by~~ comprising:

a reaction container ~~which processes~~ to process a plurality of substrates;

a heater ~~which heats~~ to heat said plurality of substrates; and

at least one nozzle through which reaction gas is ~~supplied~~ to be supplied into said reaction container, wherein

said nozzle ~~is~~ includes an attaching portion attached to said reaction container with said nozzle penetrating a wall of said reaction container, ~~and~~ a flow-path cross-sectional area of a portion of said nozzle that is opposed to at least said heater is greater than a flow-path cross-sectional area of the nozzle-attaching portion, and a cross-sectional shape of the portion of said nozzle that is opposed to at least said heater is formed into a shape in which a width in a direction of a straight line connecting a center of the substrate and a center of the nozzle with each other is smaller than a width in a direction perpendicular to the straight line direction.

2. (Currently amended) A substrate processing apparatus as recited in claim 1, ~~characterized in that~~ wherein a cross-sectional shape of the portion of said nozzle that is opposed to at least said heater is formed into a squashy circular shape.

3. (Currently amended) A substrate processing apparatus as recited in claim 2, ~~characterized in that~~ wherein said cross-sectional shape of the attaching portion of said nozzle is formed into a circular shape.

4. (Currently amended) A substrate processing apparatus as recited in claim 1, ~~characterized in that~~ wherein a cross-sectional shape of a portion of said nozzle that is opposed to at least said heater is formed into substantially elliptic shape, and a short axis thereof is oriented toward a central portion of the substrate.

Claims 5-7 (Cancelled).

8. (Currently amended) A substrate processing apparatus as recited in claim 1, ~~characterized in that~~ wherein said nozzle includes a horizontal portion extending in a horizontal direction and a vertical portion rising in a vertical direction, said horizontal portion is attached to a sidewall of said reaction container, and a portion of the vertical portion is opposed to said heater.

9. (Currently amended) A substrate processing apparatus as recited in claim 1, ~~characterized in that~~ wherein said reaction gas is a film-forming gas, and said processing is a film-forming processing.

10. (Currently amended) A substrate processing apparatus as recited in claim 1, ~~characterized in that~~ wherein said reaction gas is SiH_4, and said processing is a film-forming processing of a silicon film.

11. (Currently amended) A substrate processing apparatus as recited in claim 1, ~~characterized in that~~ wherein said nozzle comprises a plurality of nozzles having different lengths.

12. (Currently amended) A substrate processing apparatus as recited in claim 11, ~~characterized in that~~ wherein said heater is divided into a plurality of heater zones, and when said substrate is processed, temperatures in the reaction container corresponding to the respective heater zones are maintained at the same temperatures.

13. (Currently amended) A substrate processing apparatus as recited in claim 12, ~~characterized in that~~ wherein said reaction gas is SiH_4, and said processing is a film-forming processing of a silicon film.

14. (Currently amended) A substrate processing apparatus as recited in claim 13, ~~characterized by comprising~~ wherein:

when the substrate is processed, said heater maintains temperatures in said reaction container corresponding to the respective heater zones in a range of 650 to 670°C.

15. (Currently amended) A producing method of a semiconductor device, ~~characterized by~~ comprising:

~~a step for~~ transferring a substrate or a substrates into a reaction container,

~~a step for~~ processing the substrate or substrates by supplying reaction gas ~~into a~~ into the reaction container through a nozzle having an attaching portion which is attached to said reaction container such that the nozzle penetrates a wall of the reaction container, ~~and in which~~ a flow-path cross-sectional area of a portion of the nozzle opposed to at least a heater ~~is~~ being greater than a flow-path cross-sectional area of the attaching portion, and a cross-sectional shape of the portion of said nozzle that is opposed to at least said heater being formed into a shape in which a width of the portion of said nozzle in a direction of a straight line connecting a center of the substrate and a center of the nozzle with each other is smaller than a width of the portion of the nozzle in a direction perpendicular to the straight line direction; and

~~a step for~~ transferring the processed substrate or substrates out from the reaction container.

16. (New) A substrate processing apparatus, comprising:

a reaction container to process a plurality of substrates;

a heater to heat the plurality of substrates; and

a first nozzle and at least one second nozzle, each of the first and at least one second nozzle having a nozzle-attaching portion attached to the reaction container, to supply reaction gas into the reaction container, wherein

the first nozzle is disposed in the reaction container such that the first nozzle is not opposed to the heater, and the at least one second nozzle is disposed in the reaction container such that a portion of the at least one second nozzle is opposed to the heater, and

a flow-path cross-sectional area of the portion of the at least one second nozzle that is opposed to the heater is greater than a flow-path cross-sectional area of the at least one second

nozzle nozzle-attaching portion and a flow-path cross-sectional area of the first nozzle.

17. (New) The substrate processing apparatus as recited in claim 16, wherein the at least one second nozzle comprises a plurality of nozzles having different lengths.

18. (New) A substrate processing apparatus, comprising:

a reaction container to process a plurality of substrates;

a heater to heat the plurality of substrates; and

first and second nozzles, respectively attached to the reaction container, to supply reaction gas into the reaction container, wherein

the first nozzle is disposed in the reaction container such that the first nozzle is not opposed to the heater, the second nozzle is disposed in the reaction container such that a portion of the second nozzle is opposed to the heater, and

a flow-path cross-sectional area of the portion of the second nozzle that is opposed to the heater is greater than a flow-path cross-sectional area of the first nozzle.

19. (New) A producing method of a semiconductor device, comprising:

loading at least one substrate into a reaction container;

processing the at least one substrate by supplying reaction gas into the reaction container through a first nozzle attached to the reaction container at a first nozzle attaching portion and a second nozzle attached to the reaction container at a second nozzle attaching portion, the first nozzle being disposed in the reaction container such that the first nozzle is not opposed to a heater, the second nozzle being disposed in the reaction container such that a portion of the second nozzle is opposed to the heater, and a flow-path cross-sectional area of the portion of the second nozzle that is opposed to the heater being greater than a flow-path cross-sectional area of the second nozzle nozzle-attaching portion and a flow-path cross-sectional area of the first nozzle; and

unloading the at least one substrate from the reaction container after the processing.

20. (New) A producing method of a semiconductor device, comprising:

loading at least one substrate into a reaction container;

processing the at least one substrate by supplying reaction gas into the reaction container through a first nozzle and a second nozzle which are attached to the reaction container, the first nozzle being disposed in the reaction container such that the first nozzle is not opposed to a heater, the second nozzle being disposed in the reaction container such that a portion of the second nozzle is opposed to the heater, and a flow-path cross-sectional area of the portion of the second nozzle that is opposed to the heater being greater than a flow-path cross-sectional area of the first nozzle; and

unloading the at least one substrate from the reaction container after the processing.